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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/039,232	12/31/2001	William G. Reeves	11710-0320 (44043-263105)	7301
23556	7590	06/07/2004	EXAMINER	
KIMBERLY-CLARK WORLDWIDE, INC. 401 NORTH LAKE STREET NEENAH, WI 54956			SALVATORE, LYNDIA	
			ART UNIT	PAPER NUMBER
			1771	

DATE MAILED: 06/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/039,232

Applicant(s)

REEVES ET AL.

Examiner

Lynda M Salvatore

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 31 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 and 29-45 is/are rejected.
- 7) ☒ Claim(s) 28 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 09/22/03 # 09/17/03
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-45 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation of rinsing the substrate to form a coating. However, it is not clear from the claims as to what sort of coating is being formed. Is it a carbohydrate or carbohydrate-salt complex coating? The specification describes forming a regenerated carbohydrate coating. The examiner is prosecuting the claims with this interpretation. Claims 2-45 are rejected for their dependency either directly or indirectly on claim 1.

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-22, 31-36, and 40-42 and 25-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dinh-Sybeldon et al., US 6,051,335 in view of Chen, US 4,999,149.

Dinh-Sybeldon et al., teaches applying a cellulose film coating onto a non-woven substrate (polyester, polyamide), where the cellulose coating can be applied by a variety of

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methods, where the cellulose is dissolved, coated onto the substrate, and then the solvent is removed. Dinh-Sybeldon et al., incorporates as reference U.S. patent 4,999,149 by Chen, which teaches methods of forming cellulosic articles. (Col. 6, line 64-Col. 7, line 50). Chen teaches forming a cellulose article, where cellulose is dissolved in an aqueous solution of zinc chloride to form a cellulose/zinc chloride mixture, and then exposing/rinsing the mixture with a solvent (ethanol, methanol, isopropanol, etc.) and then with water to remove the cellulose from solution, thus forming a cellulose article separated from the zinc chloride and solution (Col. 4, line 12-Col. 5, line 34; Example I). Chen teaches that the mixture can be 5-45 % by weight of cellulose and 55-80 % by weight zinc chloride and that the mixture is heated to 40-120°C for dissolving (Col. 4, lines 25-50). Dinh-Sybeldon et al., also teaches adding a surfactant to the cellulose (Col. 7, lines 20-25). With specific regard to claims 31 and 34, Chen fails to teach the claimed carbohydrate content range, however, it is the position of the Examiner that it would have been obvious to one having ordinary skill in the art at the time the invention was made to vary the amount of cellulose used in the coating solution as a function of wettability. With regard to claim 32, Dinh-Sybeldon et al., fails to teach discontinuously coating the substrate, however, it is the position of the Examiner that it would have been obvious to one having ordinary skill in the art at the time the invention was made to vary the substrate coating to achieve a desirable balance of properties. With regard to claim 33, the recitation of a “product for use in a printing application” constitutes an intended use. As such, it is the position of the Examiner that since the prior meets all of the structural and chemical limitations there is nothing to evidence that the article taught by the combination of Dinh-Sybeldon et al., and Chen, could not function in the desired capacity.

Therefore, it would have been obvious to one of ordinary skill in the art to use the cellulose forming method of Chen for forming the cellulose film in Dinh-Sybeldon et al., with the expectation of providing the desired cellulose formation on the substrate, since Dinh-Sybeldon et al. expressly indicates that the Chen method can be used for the cellulose film formation.

Dinh-Sybeldon et al., does not teach that the cellulose coating is hydrophilic and non-leaching or that the substrate is hydrophobic. However, cellulose is generally considered to be hydrophilic and thus the cellulose coating of Dinh-Sybeldon et al., would have been expected to be hydrophilic. Also, polyester and polyamide are generally considered to be hydrophobic, thus the substrate of Dinh-Sybeldon et al., would have been expected to be hydrophobic. Furthermore, since Dinh-Sybeldon et al., and Chen teach the same materials and process, as claimed, it would have been expected that the cellulose coating and the substrate of Dinh-Sybeldon et al., and Chen would also have the same properties as the claimed invention.

Dinh-Sybeldon et al., and Chen do not teach the Hammett acidity of the zinc chloride. However, it appears from the applicant's specification that zinc chloride has the claimed Hammett acidity property.

Dinh-Sybeldon et al., and Chen do not teach the temperature of the rinsing step. However, one of ordinary skill in the art would have recognized that temperature is a known result-effective variable in precipitation reactions, as temperature affects the rate and degree of precipitation. Therefore, it would have been obvious to one skilled in the art to determine a workable or optimal temperature condition for the rinsing/cellulose precipitation step of Dinh-Sybeldon et al., and Chen, through routine experimentation, in order to find a temperature that

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achieves the desired cellulose formation on the substrate. It is the examiner's position that the claimed rinsing temperature would have been obvious to one skilled in the art practicing Dinh-Sybeldon et al., and Chen, through such routine experimentation.

Chen teaches that the amount of water in the solution mixture of cellulose and zinc chloride reduces the amount of solid particles in the solution (Col. 5, lines 1-27). This reads on the claimed control of orientation and degree of aggregation of the mixture. This is a clear teaching that the amount water in the solution does affect the nature of the solution. Thus, one skilled in the art would have found it obvious to control the amount of water in the solution mixture, in Dinh-Sybeldon et al., and Chen, in order to control the amount of solid particles in the solution.

Dinh-Sybeldon et al., does not teach the claimed method of application of the solution to the substrate. However, dipping and spraying are well established methods of applying a solution to a substrate for coating and thus would have been an obvious modification to Dinh-Sybeldon et al., with the expectation of achieving the desired solution deposition on the substrate.

5. Claims 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dinh-Sybeldon et al., and Chen as applied to claim 22 above, and further in view of Bridgeford.

Dinh-Sybeldon et al., and Chen fail to teach the type of surfactant added to the cellulose. Therefore, one of ordinary skill in the art would have found it obvious to add any conventional surfactant used as a cellulose additive, in Dinh-Sybeldon et al., and Chen, with the expectation of providing the desired result. Bridgeford teaches that sodium lauryl sulfonate, which is anionic, is a surfactant additive for cellulose films (Col. 3, lines 47-65; Col. 6, lines 34-45). It would have

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been obvious to one skilled in the art to use sodium lauryl sulfonate as the surfactant additive of Dinh-Sybeldon et al., and Chen, with the expectation of providing the desired results, as it is shown by Bridgeford that sodium lauryl sulfonate is a known surfactant additive for cellulose films.

6. Claims 25,26,27,29, 30,37,38,39, and 43-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dinh-Sybeldon et al., and Chen as applied to claims 1, 24,36 and 41 above, and further in view of Pazdernik, US 4,753,649.

Dinh-Sybeldon et al., and Chen fail to teach incorporating the cellulose coated substrate into a disposable personal care product such as the diaper disclosed by Pazdernik. However, it is the position of the Examiner that since the combination of Dinh-Sybeldon et al., and Chen meet the structural and chemical limitations set forth there is nothing on record to evidence that the article of Dinh-Sybeldon et al., and Chen could not be utilized in a disposable absorbent article. One of ordinary skill in the art would be motivated to employ the cellulosic coated substrate taught by the combination of Dinh-Sybeldon et al., and Chen to expand the number of applications. Therefore, motivated by the desire to provide a disposable personal care article, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the cellulosic coated substrate taught by the combination of Dinh-Sybeldon et al., and Chen in the disposable personal care article of Pazdernik.

***Allowable Subject Matter***

7. Claim 28 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

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8. The following is a statement of reasons for the indication of allowable subject matter:
- None of the prior art cited or reviewed by the examiner teaches or fairly suggests performing the claimed coating process using chitin as the carbohydrate.

***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Thor and Turbak et al. are cited as prior art of interest.

Thor teaches forming a film of regenerated chitin.

Turbak et al. teaches solubilizing cellulose with a zinc chloride solution.


10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lynda M Salvatore whose telephone number is 571-272-1482. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571-272-1482. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

May 26, 2004

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CHERYL A. JUSKA  
PRIMARY EXAMINER